

0590  
1123  
#3

OIPE

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/689,730

DATE: 12/11/2001

TIME: 18:17:14

Input Set : N:\Crf3\RULE60\09689730.raw

Output Set: N:\CRF3\12112001\I689730.raw

P.S

ENTERED

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1 <110> APPLICANT: SEIKI, Motoharu
2   SATO, Hiroshi
3   SHINAGAWA, Akira
4 <120> TITLE OF INVENTION: NOVEL METALLOPROTEINASE AND ENCODING DNA THEREFOR
5 <130> FILE REFERENCE: 55-290P
6 <140> CURRENT APPLICATION NUMBER: 09/689,730
7 <141> CURRENT FILING DATE: 2000-10-13
8 <150> PRIOR APPLICATION NUMBER: US/08/448,489
9 <151> PRIOR FILING DATE: 1995-06-07
10 <160> NUMBER OF SEQ ID NOS: 19
11 <170> SOFTWARE: PatentIn Ver. 2.0
13 <210> SEQ ID NO: 1
14 <211> LENGTH: 582
15 <212> TYPE: PRT
16 <213> ORGANISM: Homo sapiens
17 <400> SEQUENCE: 1
18   Met Ser Pro Ala Pro Arg Pro Ser Arg Cys Leu Leu Pro Leu Leu
19       1             5             10             15
20   Thr Leu Gly Thr Ala Leu Ala Ser Leu Gly Ser Ala Gln Ser Ser Ser
21               20             25             30
22   Phe Ser Pro Glu Ala Trp Leu Gln Gln Tyr Gly Tyr Leu Pro Pro Gly
23       35             40             45
24   Asp Leu Arg Thr His Thr Gln Arg Ser Pro Gln Ser Leu Ser Ala Ala
25       50             55             60
26   Ile Ala Ala Met Gln Lys Phe Tyr Gly Leu Gln Val Thr Gly Lys Ala
27       65             70             75             80
28   Asp Ala Asp Thr Met Lys Ala Met Arg Arg Pro Arg Cys Gly Val Pro
29               85             90             95
30   Asp Lys Phe Gly Ala Glu Ile Lys Ala Asn Val Arg Arg Lys Arg Tyr
31       100            105            110
32   Ala Ile Gln Gly Leu Lys Trp Gln His Asn Glu Ile Thr Phe Cys Ile
33       115            120            125
34   Gln Asn Tyr Thr Pro Lys Val Gly Glu Tyr Ala Thr Tyr Glu Ala Ile
35       130            135            140
36   Arg Lys Ala Phe Arg Val Trp Glu Ser Ala Thr Pro Leu Arg Phe Arg
37       145            150            155            160
38   Glu Val Pro Tyr Ala Tyr Ile Arg Glu Gly His Glu Lys Gln Ala Asp
39               165            170            175
40   Ile Met Ile Phe Phe Ala Glu Gly Phe His Gly Asp Ser Thr Pro Phe
41       180            185            190
42   Asp Gly Glu Gly Gly Phe Leu Ala His Ala Tyr Phe Pro Gly Pro Asn
43       195            200            205
44   Ile Gly Gly Asp Thr His Phe Asp Ser Ala Glu Pro Trp Thr Val Arg
45       210            215            220
46   Asn Glu Asp Leu Asn Gly Asn Asp Ile Phe Leu Val Ala Val His Glu
47       225            230            235            240
48   Leu Gly His Ala Leu Gly Leu Glu His Ser Ser Asp Pro Ser Ala Ile

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```

49                                     245                               250                               255
50      Met Ala Pro Phe Tyr Gln Trp Met Asp Thr Glu Asn Phe Val Leu Pro
51                                     260                               265                               270
52      Asp Asp Asp Arg Arg Gly Ile Gln Gln Leu Tyr Gly Gly Glu Ser Gly
53                                     275                               280                               285
54      Phe Pro Thr Lys Met Pro Pro Gln Pro Arg Thr Thr Ser Arg Pro Ser
55                                     290                               295                               300
56      Val Pro Asp Lys Pro Lys Asn Pro Thr Tyr Gly Pro Asn Ile Cys Asp
57      305                               310                               315                               320
58      Gly Asn Phe Asp Thr Val Ala Met Leu Arg Gly Glu Met Phe Val Phe
59                                     325                               330                               335
60      Lys Lys Arg Trp Phe Trp Arg Val Arg Asn Asn Gln Val Met Asp Gly
61                                     340                               345                               350
62      Tyr Pro Met Pro Ile Gly Gln Phe Trp Arg Gly Leu Pro Ala Ser Ile
63                                     355                               360                               365
64      Asn Thr Ala Tyr Glu Arg Lys Asp Gly Lys Phe Val Phe Phe Lys Gly
65      370                               375                               380
66      Asp Lys His Trp Val Phe Asp Glu Ala Ser Leu Glu Pro Gly Tyr Pro
67      385                               390                               395                               400
68      Lys His Ile Lys Glu Leu Gly Arg Gly Leu Pro Thr Asp Lys Ile Asp
69                                     405                               410                               415
70      Ala Ala Leu Phe Trp Met Pro Asn Gly Lys Thr Tyr Phe Phe Arg Gly
71                                     420                               425                               430
72      Asn Lys Tyr Tyr Arg Phe Asn Glu Leu Arg Ala Val Asp Ser Glu
73      435                               440                               445
74      Tyr Pro Lys Asn Ile Lys Val Trp Glu Gly Ile Pro Glu Ser Pro Arg
75      450                               455                               460
76      Gly Ser Phe Met Gly Ser Asp Glu Val Phe Thr Tyr Phe Tyr Lys Gly
77      465                               470                               475                               480
78      Asn Lys Tyr Trp Lys Phe Asn Asn Gln Lys Leu Lys Val Glu Pro Gly
79                                     485                               490                               495
80      Tyr Pro Lys Ser Ala Leu Arg Asp Trp Met Gly Cys Pro Ser Gly Gly
81      500                               505                               510
82      Arg Pro Asp Glu Gly Thr Glu Glu Glu Thr Glu Val Ile Ile Ile Glu
83      515                               520                               525
84      Val Asp Glu Glu Gly Gly Gly Ala Val Ser Ala Ala Val Val Leu
85      530                               535                               540
86      Pro Val Leu Leu Leu Leu Leu Val Leu Ala Val Gly Leu Ala Val Phe
87      545                               550                               555                               560
88      Phe Phe Arg Arg His Gly Thr Pro Arg Arg Leu Leu Tyr Cys Gln Arg
89      565                               570                               575
90      Ser Leu Leu Asp Lys Val
91      580
93 <210> SEQ ID NO: 2
94 <211> LENGTH: 3403
95 <212> TYPE: DNA
96 <213> ORGANISM: Homo sapiens
97 <400> SEQUENCE: 2
98      agttcagtgc ctaccgaaga caaaggcgcc ccgagggagt ggcggtgcga cccagggcg 60

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```

99      tgggcccggc cgcgagacca cactgcccgg ctgacccggg ggtctcggac catgtctccc 120
100     gccccaaagac cctcccgttg tctcctgctc cccctgctca cgctcggcac cgcgctcgcc 180
101     tccctcggct cgccccaaag cagcagcttc agccccgaag cctggctaca gcaatatggc 240
102     tacctgcctc cgggggacct acgtacccac acacagcgt caccaccagtc actctcagcg 300
103     gccatcgctg ccatgcagaa gttttacggc ttgcaagtaa caggcaaagc tgatgcagac 360
104     accatgaagg ccatgaggcg ccccgatgt ggtgttccag acaagtttg ggctgagatc 420
105     aaggccaatg ttcgaaggaa gcgctacgcc atccagggtc tcaaatggca acataatgaa 480
106     attactttct gcatccagaa ttacaccccc aagggtggcg agtatgccac atacgaggcc 540
107     attcgcaagg cgttccgcgt gtgggagagt gccacaccac tgcgcttcgc cgagggtccc 600
108     tatgcctaca tccgtgaggg ccatgagaag caggccgaca tcatgatctt ctttgccgag 660
109     ggcttccatg gcgacagcac gcccttcgat ggtgagggcg gcttctggc ccatgcctac 720
110     ttcccagggc ccaacattgg aggagacacc cactttgact ctgccgagcc ttggactgtc 780
111     aggaatgagg atctgaatgg aaatgacatc ttctgtgtgg ctgtgcacga gctgggccc 840
112     gccctggggc tcgagcattc cagtgacccc tcggccatca tggcaccctt ttaaccagtgg 900
113     atggacacgg agaattttgt gcttcccgat gatgaccgcc ggggcatcca gcaactttat 960
114     ggggtgagt cagggttccc caccaagatg cccctcaac ccaggactac cteccggcct 1020
115     tctgttcttg ataaacccaa aaacccccacc tatgggccc aatctgtga cgggaacttt 1080
116     gacaccgtgg ccatgctccg aggggagatg tttgtcttca agaagcgtg gttctggcg 1140
117     gtgaggaata accaagtgat ggatggatac ccaatgccc ttggccagtt ctggcggggc 1200
118     ctgcctgcgt ccatcaacac tgccacagag aggaaggatg gcaaattcgt cttcttcaaa 1260
119     ggagacaagc attgggtgtt tgatgaggcg tccctggaac ctggctaccc caagcacatt 1320
120     aaggagctgg gccgagggtc gcctaccgac aagattgatg ctgctctctt ctggatgccc 1380
121     aatggaaaga cctacttctt ccgtggaaac aagtaactac gtttcaacga agagctcagg 1440
122     gcagtggata gcgagtaccc caagaacatc aaagtctggg aagggatccc tgagtctccc 1500
123     agagggtcat tcatgggcag cgatgaagtc ttcacttact tctacaaggg gaacaaatac 1560
124     tggaaattca acaaccagaa gctgaaggta gaaccgggct accccaagtc agccctgagg 1620
125     gactggatgg gctgcccac gggaggccgg ccggatgagg ggactgagga ggagacggag 1680
126     gtgatcatca ttgaggtgga cgaggaggcg ggcggggcg tgagcgcggc tgccgtggtg 1740
127     ctgcccgtgc tgcgtctgct cctgggtgct gcggtgggccc ttgcagtctt cttcttcaga 1800
128     cgccatggga cccccaggcg actgctctac tgccagcgtt ccctgctgga caaggtctga 1860
129     cgcccatccg ccggcccggc cactcctacc acaaggactt tgcctctgaa ggccagtggc 1920
130     agcagggtgt ggtgggtggg ctgctcccat cgtcccagac cccctcccg cagcctcctt 1980
131     gcttctctct gtcccctggc tggcctcctt caccctgacc gcctccctcc cccctgcccc 2040
132     ggcattgcat cttccctaga taggtccctt gagggtgag tgggagggcg gccctttcca 2100
133     gcctctgccc ctcaggggaa cctgtagct ttgtgtctgt ccagccccat ctgaatgtgt 2160
134     tgggggctct gcaattgaag gcaggaccct cagacctcgc tggtaaagggt caaatgggg 2220
135     catctgctcc ttttccatcc cctgacatac cttaacctct gaactctgac ctcaggaggc 2280
136     tctggggaac tccagccctg aaagccccag gtgtacccaa ttggcagcct ctcaactctc 2340
137     tttctggcta aaaggaatct aatcttgttg agggtagaga cctgagaca gtgtgagggg 2400
138     gtggggactg ccaagccacc ctaagacctt gggaggaaa ctcagagagg gtcttcgttg 2460
139     ctcagtcagt caagtctctc ggagatcttc ctctgcctca cctaccccag ggaacttcca 2520
140     aggaaggagc ctgagccact ggggactaag tgggcagaag aaacccttg cagccctgtg 2580
141     cctctcgaat gttagccttg gatgggctt tcacagttag aagagctgaa accaggggtg 2640
142     cagctgtcag gttaggggtgg gccggtggga gagggccggg tcagagccct ggggggtgagc 2700
143     cttaaggcca cagagaaaga acctgccc aactcaggca gctggggctg agggccaaag 2760
144     gcagaacagc cagagggggc aggaggggac caaaaaggaa aatgaggacg tgcagcagca 2820
145     ttggaaggct ggggcccggc agccaggtta aagctaacag ggggccatca ggggtggctt 2880
146     gtggagctct caggaagggc cctgaggaag gcacacttgc tctgttggt cctgtcctt 2940
147     gctgcccagg cagggtggag gggaaaggta gggcagccag agaaaggagc agagaaggca 3000

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```

148      cacaacgag gaatgagggg cttcacgaga ggccacaggg cctggctggc cacgctgtcc 3060
149      cggcctgctc accatctcag tgagggacag gagctggggc tgcttaggct gggteccacgc 3120
150      ttccctggtg ccagcacccc tcaagcctgt ctcaccagtg gcctgccctc tcgctcccc 3180
151      acccagccca cccattgaag tctccttggg tcccaaaggt gggcatggta ccggggactt 3240
152      gggagagtga gacccagtgg agggagcaag aggagagga tgtggggggg tggggcacgg 3300
153      gtaggggaaa tgggggtgaac ggtgctggca gttcggctag atttctgtct tgtttgtttt 3360
154      tttgtttgt ttaatgtata tttttattat aattattata tat 3403
156 <210> SEQ ID NO: 3
157 <211> LENGTH: 7
158 <212> TYPE: PRT
159 <213> ORGANISM: Unknown
160 <220> FEATURE:
161 <223> OTHER INFORMATION: Description of Unknown Organism: Highly conserved
162      sequence fragments from MMP family
163 <400> SEQUENCE: 3
164      Pro Arg Cys Gly Val Pro Asp
165      1 5
167 <210> SEQ ID NO: 4
168 <211> LENGTH: 9
169 <212> TYPE: PRT
170 <213> ORGANISM: Unknown
171 <220> FEATURE:
172 <223> OTHER INFORMATION: Description of Unknown Organism: Highly conserved
173      sequence fragments from MMP family
174 <400> SEQUENCE: 4
175      Gly Asp Ala His Phe Asp Asp Asp Glu
176      1 5
178 <210> SEQ ID NO: 5
179 <211> LENGTH: 20
180 <212> TYPE: DNA
181 <213> ORGANISM: Artificial Sequence
182 <220> FEATURE:
183 <223> OTHER INFORMATION: Description of Artificial Sequence: Synthetic DNA
184 <400> SEQUENCE: 5
185      cmmgvtgys gvrwbccwga 20
187 <210> SEQ ID NO: 6
188 <211> LENGTH: 25
189 <212> TYPE: DNA
190 <213> ORGANISM: Artificial Sequence
191 <220> FEATURE:
192 <223> OTHER INFORMATION: Description of Artificial Sequence: Synthetic DNA
193 <400> SEQUENCE: 6
194      ytcrtsvtcr tcraartgrr hrtcy 25
196 <210> SEQ ID NO: 7
197 <211> LENGTH: 30
198 <212> TYPE: PRT
199 <213> ORGANISM: Homo sapiens
200 <400> SEQUENCE: 7
201      Gly Gly Gly Ala Val Ser Ala Ala Val Val Leu Pro Val Leu Leu

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Input Set : N:\Crf3\RULE60\09689730.raw

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202      1      5      10      15
203      Leu Leu Leu Val Leu Ala Val Gly Leu Ala Val Phe Phe Phe
204      20      25      30
206 <210> SEQ ID NO: 8
207 <211> LENGTH: 14
208 <212> TYPE: PRT
209 <213> ORGANISM: Homo sapiens
210 <400> SEQUENCE: 8
211      Arg Glu Val Pro Tyr Ala Tyr Ile Arg Glu Gly His Glu Lys
212      1      5      10
214 <210> SEQ ID NO: 9
215 <211> LENGTH: 14
216 <212> TYPE: PRT
217 <213> ORGANISM: Homo sapiens
218 <400> SEQUENCE: 9
219      Asp Gly Asn Phe Asp Thr Val Ala Met Leu Arg Gly Glu Met
220      1      5      10
222 <210> SEQ ID NO: 10
223 <211> LENGTH: 15
224 <212> TYPE: PRT
225 <213> ORGANISM: Homo sapiens
226 <400> SEQUENCE: 10
227      Pro Lys Ser Ala Leu Arg Asp Trp Met Gly Cys Pro Ser Gly Gly
228      1      5      10      15
230 <210> SEQ ID NO: 11
231 <211> LENGTH: 489
232 <212> TYPE: PRT
233 <213> ORGANISM: Unknown
234 <220> FEATURE:
235 <223> OTHER INFORMATION: X = UNKNOWN
236 <220> FEATURE:
237 <223> OTHER INFORMATION: Description of Unknown Organism: Known Member of
238      Matrix Metalloproteinase Family
239 <400> SEQUENCE: 11
240      Met Ala Pro Ala Ala Trp Leu Arg Ser Ala Ala Ala Arg Ala Leu Leu
241      1      5      10      15
242      Pro Pro Met Leu Leu Leu Leu Leu Gln Pro Pro Pro Leu Leu Ala Arg
243      20      25      30
244      Ala Leu Pro Pro Asp Val His His Leu His Ala Glu Arg Arg Gly Pro
245      35      40      45
246      Gln Pro Trp His Ala Ala Leu Pro Ser Ser Pro Ala Pro Ala Pro Ala
247      50      55      60
248      Thr Gln Glu Ala Pro Arg Pro Ala Ser Ser Leu Arg Pro Pro Arg Cys
249      65      70      75      80
250      Gly Val Pro Asp Pro Ser Asp Gly Leu Ser Ala Arg Asn Arg Gln Lys
251      85      90      95
252      Arg Phe Val Leu Ser Gly Gly Arg Trp Glu Lys Thr Asp Leu Thr Tyr
253      100      105      110
254      Arg Ile Leu Arg Phe Pro Trp Gln Leu Val Gln Glu Gln Val Arg Gln

```

Use of n and/or Xaa has been detected in the Sequence Listing.  
 Review the Sequence Listing to insure a corresponding  
 explanation is presented in the <220> to <223> fields of  
 each sequence using n or Xaa.

MI

## VERIFICATION SUMMARY

PATENT APPLICATION: US/09/689,730

DATE: 12/11/2001

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Input Set : N:\CrF3\RULE60\09689730.raw

Output Set: N:\CRF3\12112001\I689730.raw

L:300 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:11  
L:300 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:11  
L:300 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:11  
L:440 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:13  
L:440 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:13  
L:440 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:13  
L:679 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:16  
L:679 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:16  
L:679 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:16